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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,827	05/17/2006	Carol Mary Turley	GRT/117-579	9898
23117 7590 07/25/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
GITOMER, RALPH J				
ART UNIT		PAPER NUMBER		
1657				
MAIL DATE		DELIVERY MODE		
07/25/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/573,827

Applicant(s)

TURLEY ET AL.

Examiner

Ralph Gitomer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 22-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-US)
Paper No(s)/Mail Date 5/17/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Applicant's election with traverse of Group I, claims 1-21, in the reply filed on 7/7/08 is acknowledged. The traversal is on the ground(s) that the pending claims lack unity of invention. This is not found persuasive because the common technical feature of a semipermeable membrane to contain microorganisms in a water quality testing device is not novel.

The requirement is still deemed proper and is therefore made FINAL.

The invention is directed to a method of determining water quality by contacting the water with a device that has bacteria contained within a semipermeable membrane, and determining the growth rate of the respiring bacteria in the device with a tetrazolium salt.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Caccavo in view of Thacker.

Caccavo (5,569,596) entitled "Method for Bacterial Reduction of Chromium (VI)" teaches in column 3 second full paragraph, bacteria are disposed in a semipermeable membrane where the water diffuses across the membrane into the compartment containing the bacteria. In column 5 lines 42-52, growth was determined spectrophotometrically.

The claims differ from Caccavo in that they require determining the growth rate of the respiring bacteria with a tetrazolium salt.

Thacker (6,433,332) entitled "Methods for the Rapid Detection of Actively Respiring Microorganisms" teaches in column 4 line 34, testing environmental samples of microorganisms. In column 5 lines 20-31 a tetrazolium salt is used to detect the presence of respiring microorganisms.

It would have been obvious to one of ordinary skill in this art at the time of the invention to employ the device of Caccavo to determine water quality and the then determine the bacterial growth by any known method of determining bacterial growth for its known function such as the one taught by Thacker of using a tetrazolium salt.

Regarding claims 5-7 directed to the size of the holes in the membrane, one of ordinary skill in this art would select a membrane with holes that would not permit the selected bacteria from passing through the membrane. As presented, no novelty is seen in the selection of the membrane or bacteria. Determining bacteria in water by measuring optical density and/or turbidity is conventional in this art.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of the following apply in all occurrences.

There are many instances of lack of antecedent basis in the claims, see claim 1 line 1 "the determination", claim 2 line 2, "the growth rate" for example. Claim is incomplete in that it lacks a correlating step to perform the function of the preamble. In claims 2 and 3 the preamble should be "further comprising" because the dependent claims add an additional method step. In claim 1 the determining is performed in the vessel, in claims 2 and 3 and others the determining is not performed in the vessel. In

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claim 8 "of any thereof" is unclear. In claim 11 "the exponential growth" lacks antecedent basis. In claim 12 "from the or each vessel" is not understood in context. In claim 13 nonstandard notation is used which is improper. In claim 15 and all occurrences "the vessel or test sample" is not understood. In claim 17 "the resulting bacterial population" is not understood and lacks antecedent basis. In claim 20 "the vessel of test sample" is not understood. Claim 21 is not understood as to how it is adapted and how it may or may not be carried in any location.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The abstract of the disclosure is objected to because it contains legal terminology and is not directed to the elected invention. Correction is required. See MPEP § 608.01(b).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dillman (4,382,862) teaches a bacteria removing cartridge.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ralph Gitomer whose telephone number is (571) 272-0916. The examiner can normally be reached on Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on (571) 272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ralph Gitomer/
Primary Examiner, Art Unit 1657

Ralph Gitomer
Primary Examiner
Art Unit 1657